

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A laser irradiation apparatus comprising:
 - a beam generating unit for emitting a laser beam;
 - a cylindrical lens group for dividing the emitted laser beam in a first direction, said cylindrical lens group comprising a plurality of cylindrical lenses queuing in said first direction, each of the cylindrical lenses extending in a second direction which is vertical to said first direction;
 - an optical system for overlapping divided laser beams; and
 - a slit located between said beam generating unit and said cylindrical lens group, for making edges of the emitted laser beam straight lines extending parallel to said second direction of each cylindrical lens.

2. (Previously Presented) A laser irradiation apparatus comprising:
 - a beam generating unit for emitting a laser beam;
 - a cylindrical lens group for dividing the emitted laser beam in a width direction, said cylindrical lens group comprising a plurality of cylindrical lenses queuing in said width direction, each of the cylindrical lenses extending in a longitudinal direction which is vertical to said width direction; and
 - an optical system for overlapping divided laser beams,
 - wherein a width of said cylindrical lens group is narrower than a width of the emitted laser beam.

3. (Currently Amended) A laser irradiation apparatus comprising:
 - a beam generating unit for emitting a laser beam;

a cylindrical lens group for dividing the emitted laser beam in a first direction, said cylindrical lens group comprising a number n of cylindrical lenses queuing in said first direction, each of the cylindrical lenses extending in a second direction;

an optical system for overlapping divided laser beams; and

a shielding member located between the beam generating unit and the cylindrical lens group,

wherein the first and n th cylindrical lenses of the cylindrical lens group are shielded from the laser beam by the shielding member for making edges of the emitted laser beam straight lines extending in said second direction.

4. (Previously Presented) An apparatus according to claim 1, wherein said overlapped laser beam has a longitudinal shape extending in the second direction.

5. (Previously Presented) An apparatus according to claim 2, wherein said overlapped laser beam has a longitudinal shape extending in the longitudinal direction.

6. (Previously Presented) An apparatus according to claim 3, wherein the first and n th cylindrical lenses of the cylindrical lens group comprise quartz ground glass.

7. (Previously Presented) A laser irradiation apparatus comprising:

a beam generating unit for emitting a laser beam such that a cross section of said laser beam extends in both width and longitudinal directions;

a cylindrical lens group for dividing said emitted laser beam in said width direction, said cylindrical lens group comprising a plurality of cylindrical lenses queuing in said width direction, each of the cylindrical lenses extending in said longitudinal direction;

an optical system for overlapping divided laser beams; and

a slit located between said beam generating unit and said cylindrical lens group, for making at least an edge of the emitted laser beam a straight line which is parallel to said longitudinal direction of each cylindrical lens.

8. (Previously Presented) An apparatus according to claim 7, further comprising a means for irradiating the overlapped laser beam to a substrate.

9. (Previously Presented) An apparatus according to claim 8, wherein said substrate is selected from the group consisting of a glass substrate, a quartz substrate, a ceramic substrate, a semiconductor substrate, a plastic substrate, and an organic resin substrate.

10. (Previously Presented) A laser irradiation apparatus comprising:

a beam generating unit for emitting a laser beam such that a cross section of said laser beam extends in both width and longitudinal directions;

a cylindrical lens group for dividing said emitted laser beam in said width direction, said cylindrical lens group comprising a plurality of cylindrical lenses queuing in said width direction, each of the cylindrical lenses extending in said longitudinal direction;

an optical system for overlapping divided laser beams; and

a slit located between said beam generating unit and said cylindrical lens group, for making at least one longitudinal edge of the emitted laser beam a straight line which is vertical to said width direction of said cylindrical lens group.

11. (Previously Presented) An apparatus according to claim 10, further comprising a means for irradiating the overlapped laser beam to a substrate.

12. (Previously Presented) An apparatus according to claim 11, wherein said substrate is selected from the group consisting of a glass substrate, a quartz substrate, a ceramic substrate, a semiconductor substrate, a plastic substrate, and an organic resin substrate.

13. (Currently Amended) A laser irradiation apparatus comprising:
a beam generating unit for emitting a laser beam such that a cross section of said laser beam extends in both width and longitudinal directions;
a cylindrical lens group for dividing said laser beam in said width direction, said cylindrical lens group comprising a number n of cylindrical lenses;
an optical system for overlapping divided laser beams; and
a shielding member located between the beam generating unit and the cylindrical lens group,

wherein the first and n th cylindrical lenses of the cylindrical lens group are shielded from the laser beam by the shielding member for making edges of the emitted laser beam straight lines extending in said longitudinal direction.

14. (Previously Presented) An apparatus according to claim 13, wherein the first and n th cylindrical lenses of the cylindrical lens group comprise quartz ground glass.

15. (Previously Presented) An apparatus according to claim 13, further comprising a means for irradiating the overlapped laser beam to a substrate.

16. (Previously Presented) An apparatus according to claim 15, wherein said substrate is selected from the group consisting of a glass substrate, a quartz substrate, a ceramic substrate, a semiconductor substrate, a plastic substrate, and an organic resin substrate.

17. (Previously Presented) An apparatus according to claim 1 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

18. (Previously Presented) An apparatus according to claim 1 wherein said slit comprising at least one of the group consisting of glass, quartz, ceramic, and metal.

19. (Previously Presented) An apparatus according to claim 1 wherein said optical system for overlapping divided laser beams is a convex lens.

20. (Previously Presented) An apparatus according to claim 1, wherein said laser beam is a harmonic of a laser.

21. (Previously Presented) An apparatus according to claim 2 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

22. (Previously Presented) An apparatus according to claim 2 wherein said optical system for overlapping divided laser beams is a convex lens.

23. (Previously Presented) An apparatus according to claim 2, wherein said laser beam is a harmonic of a laser.

24. (Previously Presented) An apparatus according to claim 3 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

25. (Previously Presented) An apparatus according to claim 3 wherein said optical system for overlapping divided laser beams is a convex lens.

26. (Previously Presented) An apparatus according to claim 3, wherein said laser beam is a harmonic of a laser.

27. (Previously Presented) An apparatus according to claim 7 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

28. (Previously Presented) An apparatus according to claim 7 wherein said slit comprises at least one of the group consisting of glass, quartz, ceramic, and metal.

29. (Previously Presented) An apparatus according to claim 7 wherein said optical system for overlapping divided laser beams is a convex lens.

30. (Previously Presented) An apparatus according to claim 7, wherein said laser beam is a harmonic of a laser.

31. (Previously Presented) An apparatus according to claim 10 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

32. (Previously Presented) An apparatus according to claim 10 wherein said slit comprises at least one of the group consisting of glass, quartz, ceramic, and metal.

33. (Previously Presented) An apparatus according to claim 10 wherein said optical system for overlapping divided laser beams is a convex lens.

34. (Previously Presented) An apparatus according to claim 10, wherein said laser beam is a harmonic of a laser.

35. (Previously Presented) An apparatus according to claim 13 further comprising a stage for holding a substrate having a semiconductor film thereon, wherein said semiconductor film is crystallized by irradiating with the laser beam.

36. (Previously Presented) An apparatus according to claim 13 wherein said optical system for overlapping divided laser beams is a convex lens.

37. (Previously Presented) An apparatus according to claim 13, wherein said laser beam is a harmonic of a laser.